Claims

1. A pigment, the particles of which generally have a length of from 2 µm to 5 mm, a width of from 2 µm to 2 mm, and a thickness of from 20 nm to 2 µm, and a ratio of length to thickness of at least 2 : 1, wherein the particles contain a core of SiO_y with $0.70 \leq y \leq 1.95$, especially $1.1 \leq y \leq 1.8$, having two substantially parallel faces, the distance between which is the shortest axis of the core, comprising (a) a material, especially a metal oxide, having a high index of refraction.

2. The pigment, the particles of which generally have a length of from 2 µm to 5 mm, a width of from 2 µm to 2 mm, and a thickness of from 20 nm to 2 µm, and a ratio of length to thickness of at least 2 : 1, wherein the particles contain a core of SiO_y with $0.70 \leq y \leq 1.95$, especially $1.1 \leq y \leq 1.8$, having two substantially parallel faces, the distance between which is the shortest axis of the core, comprising
(a) a thin semi-transparent metal layer.

3. The pigment according to claim 1, wherein the pigment comprises in addition (b) a metal oxide of low refractive index, wherein the difference of the refractive indices is at least 0,1.

4. The pigment according to claim 1 or 3, wherein the metal oxide of high refractive index is TiO_2, ZrO_2, Fe_2O_3, Fe_3O_4, Cr_2O_3, ZnO or a mixture of these oxides or an iron titanate, an iron oxide hydrate, a titanium suboxide or a mixture and/or mixed phase of these compounds.

5. The pigment according to any of claims 1, 3, or 4, wherein the metal oxide of low index of refraction is SiO_2, Al_2O_3, AlOOH, B_2O_3, or a mixture thereof, wherein alkali or earth alkali metal oxides can be contained as additional component.

6. The pigment according to any of claims 1 to 5, wherein the SiO_y core has a thickness of from 20 to 200 nm, especially from 50 to 150 nm, most preferred 60 to 120 nm.

7. A process for producing the interference pigment according to any of claims 1 and 3 to 6, by alternately coating SiO_y flakes with a metal oxide with a high refractive index and a metal oxide with a low refractive index in a wet process by hydrolysis of the

corresponding water-soluble metal compounds, by separating, drying and optionally calcinating the pigment thus obtained.

8. A process for producing the pigment according to claim 2, wherein SiO_y flakes are suspended in an aqueous and/or organic solvent containing medium in the presence of a metal compound and the metal compound is deposited onto SiO_y flakes by addition of a reducing agent.

9. A pigment, the particles of which generally have a length of from 2 μm to 5 mm, a width of from 2 μm to 2 mm, and a ratio of length to thickness of at least 2 : 1, wherein the particles contain a core of SiO_2 or a silicon/silicon oxide core obtainable by heating SiO_y flakes with $0.70 \leq y \leq 1.80$, especially $1.1 \leq y \leq 1.8$, in an oxygen-free atmosphere at a temperature of at least 400°C, having two substantially parallel faces, the distance between which is the shortest axis of the core, comprising
a material, especially a metal oxide, having a high index of refraction, or
a thin semi-transparent metal layer and optionally further layers, wherein
the core has a thickness of from 20 to 200 nm, especially from 40 to 150 nm, most preferred 60 to 120 nm.

10. Use of the pigments according to any of claims 1 to 6 or 9 in paints, ink-jet printing, for dyeing textiles, for pigmenting coatings, printing inks, plastics, cosmetics, glazes for ceramics and glass.

11. Paints, printing inks, plastics, cosmetics, ceramics and glass, which are pigmented with a pigment Pigment according to any of claims 1 to 6 or 9.